



PUBLIC HEALTH LABORATORY,

14, TEMPLE STREET, BIRMINGHAM,  
JUNE 19TH, 1899.

TO THE SANITARY COMMITTEE  
OF  
THE WARWICKSHIRE COUNTY COUNCIL.

MR. CHAIRMAN, MY LORDS AND GENTLEMEN,

I have the honour to hand you herewith my summary of the reports of the Medical Officers of Health of the various Urban and Rural Sanitary Districts in the County for the year 1898. As far as I know there has not been any alteration in the area of the districts of the County, although I notice that in one or two instances the area is slightly different from that given in previous reports. I propose to adopt the same form as in the nine previous years I have made this report, viz., a summary of each Medical Officer of Health's report, followed by a consideration of statistics and other matters affecting the County as a whole. In the statistics the birth, death, and Zymotic death-rates are calculated per thousand persons estimated to be living, while the infant mortality is reckoned on children who die under one year of age per 1,000 registered births.

URBAN DISTRICTS.

ASTON MANOR.

Mr. HENRY MAY intimated last year that his retirement was close at hand, and at the end of the first half of 1898, he retired from office after 25 years service. He therefore makes a report according to the requirements of the Local Government Board on that part of the year for which he held office, while for the later half a report is made by his son and successor, Mr. FRANCIS H. MAY, who, while dealing more particularly with the latter half of the year since his election, deals also generally with the statistics for the whole year.

In Mr. HENRY MAY's report for the first half-year, he says, referring to infectious disease, "Although there has been a severe outbreak of Smallpox in a large town in the north of England, no cases occurred in this district. As the time approaches when a general epidemic outbreak may be looked for, it becomes more important that you should begin the building of a new smallpox hospital upon the site you have acquired, and I believe much valuable time will be saved, and final approval facilitated by a conference at an early stage with the Local Government Board as to the proposed plans." Mr. HENRY MAY also says, "The experience of the last six months (*e.g.*, the first half of 1898), continues to give evidence of a decadence in the vitality of infants in Aston Manor. There have been 25 deaths registered from premature birth during the past six months, and 75 during the past eighteen months, which is equal to 19.4 per 1,000 registered births. During the period 1872-80, this proportion was only 12.5 per 1,000. The increasing waste of infant life in town surroundings is a serious social problem. It would naturally have been anticipated that with a falling birth-rate, and therefore a smaller number of children born in the same population, there would have been a larger number born at the full time, but the low birth-rate of the present generation has not tended to the conservation of infant life."

Referring to the sanitary state of the district in the first half of the year, Mr. MAY says, "This was fully referred to in my previous report. The substitution of W.C.'s and dry ashpits

for privies and middens has made the usual progress, although as I have already signified, I cannot regard it as sufficient to bring this district up to the modern standard, especially as it is already paying for the treatment at the outfall of the excremental refuse of every house within the district."

Referring to the statistics of the year, Mr. F. H. MAY says, "The general death-rate last year was 15·1, which is below the average of the district for the past 7 years, and considerably below that of 1897, when it reached 17 per thousand. Mr. MAY records a decrease in the prevalence and severity of Scarlet Fever during the year. The mortality of cases notified was only 2·4 per cent. compared with 3·7 in 1897, and 3·9 in the towns of England and Wales which supplied returns for that year." Of the 169 cases notified during the year, only 59 were isolated at the hospital. Mr. MAY says, referring to this, "I am not pleased with this small proportion, equal to 35 per cent., but no case has been refused admission on the ground of payment, or on any other grounds, and friends are always asked if they will let the patient go into hospital. The arrangements as to the small weekly payments continue the same as in previous years, and are made by the Medical Officer, subject to the approval of the Committee."

Mr. MAY records an increase in the number of cases of Typhoid Fever, there being 108 as compared with 78 during the previous year. In only 6 however of the 99 infected houses was there any defect in the drains, and in only 6 any very serious nuisance. Mr. MAY says, "Careful investigations were made relative to the circumstances surrounding the cases of Typhoid Fever, and since my appointment I have personally inspected the infected premises, and sought the source of infection. The milk supply being varied in almost every case had to be excluded. The water supply from the Birmingham Water Department escaped blame, as there was no marked outburst of the disease, but the pollution of the soil from privies and middens appears a suspicious source of infection. Such pollution might apply even where cases occurred in houses with W.C's., as some have only been recently substituted for privies and middens, and the poison of Typhoid Fever is proved to be capable of existing for an indefinite time in polluted soil, always ready to be active."

Mr. MAY gives tables to show how seriously Aston Manor is affected by infantile Diarrhoea, and shows that for last year the mean annual death-rate per 1,000 from this cause was 2·09. He says, "The best preventive measures I can suggest to arrest this scourge in our neighbourhood are the substitution of W.C's. for privies and middens, the paving and cleansing of backyards, free ventilation, and increased air space."

Speaking of overcrowding, Mr. MAY says, "There have been 4 instances in which my intervention was necessary, in consequence of the overcrowded condition of the houses. This does not represent by any means the number of overcrowded houses in the district, but only in the most serious has the law been applied. Overcrowding has not been more rigidly dealt with, because of the great difficulty which people now find in obtaining suitable accommodation at a reasonable price, and the inhumanity and impossibility of unhousing people under these circumstances."

Mr. MAY takes the opportunity of condemning the present hot-air disinfector, and after explaining that hot air is inferior in penetrative power to steam, he says, "During the past year your Health Committee has given much time and attention to a scheme for a new four-celled destructor, from which a plentiful supply of steam can be obtained for use in the disinfector by utilising the heat from the burning of house refuse. In accordance with my advice, they have included in their estimates and plans a new disinfection house with two rooms, pure and impure, for a new steam disinfector. I consider this one of the most important requirements of the district, especially as articles are disinfected for other districts by this Authority."

Referring to the isolation hospital, Mr. MAY also touches this subject of disinfection, and says, "I should be failing in my duty if I did not also emphasise in this report my opinion that a small steam disinfector should replace the obsolete hot-air one at your infectious hospital. The boiler necessary for this steam disinfector, when not in use for disinfecting purposes, might be utilized for producing steam to work a steam laundry, which is very necessary there, and would save labour and expense. At present the washing is all done by hand, and with even a moderately full hospital this is a big item, and full of responsibility."

The report also deals with the work done in the department of the Inspector of Nuisances, and gives in tabular form the work carried out, giving attention particularly to work done under the Food and Drugs Act.

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
80,016	31·6	15·1	2·9	186



## BULKINGTON.

Mr. PEACOCK reports a very high death-rate for this district, viz., 29 per 1,000, as against 27.52 per 1,000 in 1897, when it was also very high. This was not due to Zymotic disease, for although 35 cases of Scarlet Fever were notified, none proved fatal. The infant mortality is very high, 9 deaths occurring under one year of age in a population of 1,272. Mr. PEACOCK says, "I would again strongly advise your Council to either get a small isolation hospital or to make arrangements with other authorities for the treatment of this Zymotic, that is, Scarlet Fever."

## VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,272	40.88	29.0	0.78	173

## ERDINGTON.

Dr. A. BOSTOCK HILL is able to give a very satisfactory report on the health of this rapidly growing district. He says, "The death-rate is the lowest but one ever recorded, while the Zymotic death-rate is less than half that of 1897. The infant mortality too is much lower than of late. He also says, "that there is a most marked and gratifying improvement in this respect." There were 110 cases of infectious disease notified under the Act, compared with 113 in the previous year and 221 in 1896, but as 33 of these occurred in the Workhouse, which receives a large number of paupers from both Birmingham and Aston, and 11 in the Jaffray Hospital, only 66 are to be debited to the district proper. No death was caused by Scarlet Fever, and only 29 cases were notified in the district outside the Workhouse. Eight deaths were due however to Diphtheria, and 17 cases altogether were notified. Referring to these, Dr. BOSTOCK HILL says, "In the first quarter of the year 7 cases were notified, three proving fatal. One of them was imported. In several instances no sanitary defect could be discovered, but in others, notably in Jaffray Road and Summer Road, sanitary defects existed, which were remedied. In Jaffray Road, the sewer which was in an unsatisfactory condition has been relaid, while a ventilation shaft up one of the houses which I strongly condemned has been removed. In the June quarter two cases, one fatal, were notified. In the one case, non-fatal, the origin of the disease could not be discovered, but the other occurred at Tyburn, on the edge of the Sewage Farm, in one of the cottages belonging to the Drainage Board. This I have no doubt was due to the condition of this part of the farm, which for many months was in a very unsatisfactory state."

"In the September quarter 5 cases, 2 fatal, were reported, and 4 of these were in close propinquity to the Sewage Farm, and I have little doubt that they were due to its insanitary condition. In the December quarter three cases were notified in different parts of the district, but in none of the cases could I distinctly trace the origin of the disease."

Four deaths and 27 cases altogether were reported as due to Typhoid, but of these 21 cases occurred in the Workhouse, while 3 out of the 4 deaths were registered there. The majority of these cases were removed from the City of Birmingham, but towards the end of the year the disease broke out in the house itself, in a block on the female side. A copy of a special report made on this outbreak was forwarded to the Local Government Board and to your Council.

During the year no less than 5,854 yards of sewer have been laid, while in addition, storm water drains have been laid down in roads where they were requisite. The most important fact however of the year is that a system of scavenging is now in operation and working well throughout the district. Referring to this, Dr. BOSTOCK HILL says, "In a district which has become as populous as Erdington now is, it is essential that all filth and waste matters be removed as quickly as possible from the neighbourhood of the dwelling, and this can only be done when scavenging is carried out by the Authority under the supervision of their own officers. The time, too, has arrived in my opinion when all midden ash-pits should be done away with as far as possible. In some cases there may be difficulty in accomplishing this, but even so, much good can be done in reducing the size of old ones and in requiring reconstruction above the level of the ground according to the plans approved by the Council."

## VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
14,110	23.45	10.7	1.34	111

## KENILWORTH.

Dr. WILSON reports a death-rate rather above the average of the previous two years, but the Zymotic death-rate and the rate of infant mortality are below the average but slightly in excess of those of the previous two years. With the exception of an outbreak of Measles, the general

health of the town and district was good, as shown by the few notifications of infectious disease. There were no deaths from Scarlet Fever, Diphtheria, Fever, or Whooping Cough, and the only cases of infectious disease notified during the year were two mild cases of Scarlet Fever, two of Typhoid Fever, and two of Erysipelas, all of which recovered. Both cases of Scarlet Fever were removed to the isolation hospital. One of the cases of Typhoid Fever was associated with a polluted well, which was closed; the other with a foul privy, which was remedied.

Referring to works of a public nature, Dr. WILSON says, "I have to report that public scavenging has been fairly well attended to, and that the various recommendations which I submitted in my last report, of filling up all deep ashpits ground level, and of converting privy and midden ashpits on premises within the statutory distance of sewers and watermains, are being gradually carried out. It will be seen from Mr. TREPPE's report that 30 defective and deep ashpits have been filled up to ground level, and that 25 privies have been converted into dry ashpit closets. The sewers have been kept well flushed, and the ventilation of the dead ends of branch sewers which was carried out during the previous year has permitted the closure of any offensive street ventilators, so that no serious complaints on that score have been received. Kenilworth has all along been a favourite health resort for people from neighbouring towns in the midlands, and as its health advantages and natural charms become better known, I have no doubt at all it will continue to advance as a desirable place of residence."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
4,510	25·7	15·1	0·66	94

#### LEAMINGTON.

Dr. BROWNE records a lower death-rate than in the previous year; the Zymotic death-rate however, though still low, was double that of last year. Referring to this, Dr. BROWNE says, "Of course but for the increase in Diarrhoea, many of which cases I have no doubt were not of Zymotic origin, this death-rate would have remained a very low one."

Only 19 cases of Diphtheria occurred, of which 7 proved fatal. Seven cases were due to insanitary premises. On account of Measles, the infant department of Clapham Terrace School was closed from the 28th of March to the 9th of May, while on the 27th of May the infant school of St. Peter's Roman Catholic Church had to be closed for a month from the same cause.

Thirteen cases of Typhoid Fever were reported, principally in the South-East and West Wards, although Dr. BROWNE says, "Five were imported from a distance, and in my opinion 4 were due to contaminated milk and 4 were doubtful cases and may be disregarded. Cases supposed to be due to milk were in different parts of the Borough and all supplied by the same dairy. When certain prohibitions had been made, and the dairyman warned that his milk had been suspected, no fresh case occurred." Dr. BROWNE points out the desirability of boiling milk and water before use, in order that protection at all times against this disease may be insured.

Dr. BROWNE records that the mortuary is completed, is well-lighted, ventilated, and supplied with water. He says also, "For years past I have advocated having a disinfecting chamber for the sole use of the Borough. The present system of sending to Heathcote Hospital may easily break down under the strain of an epidemic, and for this we ought to be prepared. I trust that we shall have a disinfector in use before my next annual report." Dr. BROWNE records much good work done in the way of regulating offensive trades, dairies, cowsheds, milkshops, etc., etc.

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
27,420	19·07	15·4	0·9	145

#### NUNEATON.

Mr. PEACOCK complains of the difficulty of rightly estimating the population in certain of the wards and asks for a quinquennial census. He reports a higher death-rate than in the previous year. Scarlet Fever, though fairly prevalent, was not so much so as in 1897.

Referring to Measles, Mr. PEACOCK says, "This zymotic was very prevalent, and very fatal in Nuneaton during the months of March and April. Thirty-eight deaths occurred in the Nuneaton Ward as against 12 in 1897, and the deaths were directly due in most of the cases to chest complications. Measles was somewhat prevalent in Chilvers Coton Ward, nine deaths resulted as against none in 1897, so that 47 deaths occurred in 1898 in the combined Wards as against 12 in 1897. The same indiscriminating mixing of the



children in each other's houses was particularly noticeable, and spread the epidemic rapidly. It was epidemic in this Ward in the first quarter." Thirty-three deaths were registered in the Nuneaton Ward from Diarrhœa, it being very prevalent and fatal in August and September. Mr. PEACOCK says, that "Influenza was more prevalent than in former years, 6 deaths altogether being registered." Twenty-five cases of Typhoid Fever as against 8 in 1897 were notified. In the majority of cases they appear to have been associated with impure water. Mr. PEACOCK reports that  $3\frac{1}{2}$  miles of water mains have been laid, and some 70 houses connected, and he considers that this must have an improved effect on the health of the district. Finally Mr. PEACOCK pleads for the more efficient performance of vaccination and re-vaccination.

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
18,116	44·08	22·1	6·33	194

#### RUGBY.

Dr. WILSON reports a very low and satisfactory death-rate, practically the same as in 1896 and 1897, and much below even the low average of previous years. He also reports that the Zymotic death-rate and the rate of infant mortality are below the average. He says, "In every respect therefore the general health of the town has continued to be very satisfactory." Among causes of death one was attributed to Diphtheria, two to Typhoid Fever, four to Measles and eight to Diarrhœa. Of the two deaths attributed to Typhoid Fever Dr. WILSON says, "One which was associated with defective house drainage occurred in Cambridge Street, and the other, a somewhat doubtful case, in Railway Terrace."

Only 11 cases of Scarlet Fever, none being fatal, were recorded. Referring to the absence of compulsory notification Dr. WILSON says, "It is probable that there may have been a few more cases, but as the sanitary inspector is also school attendance officer, any threatened prevalence of this or any other infectious disease among children would come under his observation, apart from the voluntary information which the medical men in the town are always ready to give when anything of a serious nature crops up. But in fairness to them and in the interest of the town the wisest and best policy is to adopt the Infectious Diseases Notification Act. One or two neighbouring authorities have not been slow to hint that infectious disease was spread in their district from Rugby, and though that inference was disproved the charge is likely to be repeated so long as the town holds the very invidious position of being the only district, whether urban or rural, in the whole county, which has not adopted the Act, and indeed one of the very few such districts throughout the whole country. It is true that for years back the town has fortunately been very free from diseases included under the Act, but such immunity cannot be expected to continue, and more especially when the recent rapid growth of the town is taken into consideration. Without notification and adequate hospital accommodation the sanitary defences are very incomplete, and even the antiquated disinfecting apparatus can no longer be depended on, except perhaps when it burns or scorches the articles conveyed to it for disinfection. In saying this much I am not overlooking the fact that the best efforts of the Council have all along been exerted, and with the most gratifying results, to improve the sanitary condition of the town, and to cope with its constantly increasing requirements, but even perfect sanitation will not ward off or check outbreaks of Scarletina or Diphtheria among children, or the Smallpox among children and adults, without proper means of isolation, and this blind unreasoning revolt against vaccination, in which the bulk of the population of the town and neighbourhood seems to have joined, will I fear lead to such an outbreak of Smallpox when the disease again becomes prevalent in the country that the accommodation of the old hospital will be powerless to cope with it so long as vaccination is neglected."

As regards questions of general sanitation Dr. WILSON says, "I would beg to repeat a recommendation which I have made on previous occasions, viz. : that the antiquated building and other bye-laws should be revised on the lines laid down in the model bye-laws issued by the Local Government Board. I may also venture to point out that the Council now own a few of the worst cottages in the town. I refer to those purchased not long ago in Pinders Lane. Two of these have been demolished to improve the thoroughfare, but I hope the others will also soon be cleared away, and if the space is not utilized for the erection of a municipal lodging house as was at one time proposed, it can be used for the erection of a few more cottages for some of the workmen permanently employed by the Council, or sold."

Dr. WILSON calls attention to the necessity of the provision of additional public slaughter-houses. He says, "This I know has been receiving attention, and I quite appreciate the difficulties which have to be faced, but the want of sufficient slaughter-house accommodation for the town has become acute, and it would be a retrograde step to license any more slaughter-houses in the town itself."

He also calls attention to the necessity of making provision for an improved water supply, owing to the rapid growth of the town.

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
15,850	27·0	11·32	0·94	97

#### STRATFORD ON-AVON.

Dr. THOMSON reports, "That it is satisfactory to find that the health of the town maintains the standard of excellence, which I was able to report for the year 1897. As a reference to Table A shows there was but one death from the principal Zymotic diseases other than Diarrhoea and Dysentery, this being due to Measles." Only 13 cases of Scarlet Fever were notified of which 12 were promptly sent to hospital. Dr. THOMSON says that, "The standard of the purity of the water supply obtained in previous years has been maintained, and notwithstanding the drought of the past summer it was unnecessary to place any restrictions on the use of the water from the mains."

Referring to the housing of the working classes, Dr. THOMSON says, "In the past year a court in Meer Street has been entirely done away with, and as the cottages in it were unsatisfactory this is an advantage. There are two other courts in the town which it would be an advantage to have made to open widely to the street instead of communicating as they do now by means of a narrow covered passage. This would let air and light into them, thus improving their moral and physical atmosphere. While it has been said that the small cottages in these courts should not exist at all, since they possess at best only two small bedrooms, and are invariably overcrowded, the remedy for this lies in many cases not in the provision of larger houses (which necessarily involves higher rents), but in the older children of the family finding work and living from home."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
8,515	21·4	15·5	0·7	140

#### SUTTON COLDFIELD.

Dr. A. BOSTOCK HILL reports again a large increase in the estimated population, there being nearly 1,000 more people than in the previous year, yet notwithstanding this the general death-rate and the Zymotic death-rate remain practically at the same figure, both these rates being below the average of the last 10 years. The only disease really epidemic was Measles, though 24 and 23 cases of Scarlet Fever and Diphtheria respectively were notified.

Referring to the Diphtheria cases, Dr. BOSTOCK HILL says, "The number of cases is much larger than for some time past, but the satisfactory feature in the matter is that most of the cases have been mild, and only 3 proved fatal. There have been three distinct outbreaks, one in Wylde Green, one at Hollyhurst in Sutton Park, and one on the extreme edge of the Borough in Walmley Ward." Referring to the outbreak in Wylde Green, on which a special report was made, Dr. BOSTOCK HILL says, "I have been struck for some time past by the tendency of this part of the borough to become infected with Diphtheria, in fact nearly all the cases in the Borough of late have been in this neighbourhood. This points to some common cause in all likelihood, and after a most careful investigation and elimination of all the other probable causes, I have reluctantly come to the conclusion that the cause is to be found in the state of the public sewers in the neighbourhood. I understand that a portion of the main-road sewer in the Green Lanes is in a bad condition. The accumulated experience of sanitarians tends to prove that a sewer which is merely offensive, but which is flowing freely, is not likely to produce outbreaks of disease, but when a sewer becomes nothing but an elongated cesspool the conditions are altogether different, and it then becomes a danger to the public health." The deficiencies above referred to were put right, the sewer in the main road being partly relaid and partly diverted. The four cases which occurred at Walmley were traced to the epidemic at Tyburn in the Castle Bromwich district, the infection being brought home by a child attending school.

Referring to house sanitation and refuse removal, Dr. BOSTOCK HILL says, "In connection with this matter of refuse removal, I feel it my duty to call attention to the many old ashpit middens still in existence. If in sanitation there be one point definitely determined it is the close connection existing between the conservancy of human fecal matter near dwellings, and many forms of disease. Modern sanitation preaches the necessity of removing all filth as quickly as possible from the premises, hence the introduction of the water-carriage system. On the other hand the large receptacle or



midden where fœcal matter and other refuse is retained months and sometimes years before removal, is a survival of the dark days of hygiene. I have no hesitation in saying that all middens are bad. They not only pollute the air, but also the ground, and the ground air and water, and while there may be no external evidence of this, it is a well-determined fact which must not be neglected. But there are middens and middens, and while I should not suggest that an edict be issued abolishing them wholesale, I do think the time has arrived when all those old-time abominations known as vault privies should be done away with. In this respect the inspector has done much good work during the year, and in my opinion nothing is more desirable at the present time than that his hands should be strengthened in carrying out this department of his duty."

As evidencing the great extent to which building has been carried on, it is stated that the houses for which plans were submitted in 1898, when fully occupied will provide accommodation for upwards of 1,500 people.

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
12,619	17·35	11·64	0·95	91

#### WARWICK.

Dr. WILSON reports, "That while the general death-rate is below the average of previous years, both the death-rate from Zymotic disease and the rate of infant mortality are above the average, but with the exception of the single death attributed to Diphtheria, the Zymotic death-rate was entirely due to deaths from Measles, Whooping Cough and Infantile Diarrhœa, while if the health of the Borough is gauged by the very small number of cases of Fever or infectious disease notified during the year, it must be regarded on the whole as having been satisfactory." Only 2 cases of Diphtheria were notified, and only 21 cases of Scarlet Fever of a mild type. Five cases of Typhoid Fever were reported, one of which was introduced from Foleshill. The other four occurred in different parts of the Borough, and were associated with insanitary conditions, but none of the cases were connected with each other. Measles was prevalent, particularly in the Coten End and Emsecote parts of the Borough, and in consequence the infant department of the Coten End School was closed.

Referring to matters of general sanitation, Dr. WILSON says, "It was very gratifying to find that the extension of the adits at Haseley has increased the volume of the water so much that it not only stood the severe test induced by the prolonged drought of the late summer and autumn months, but provided water in abundance to water the streets and flush the sewers."

Referring to the question of over-crowding, Dr. WILSON says, "Although cases of this description are not very numerous they have all along necessitated considerable forbearance as regards time for abatement, owing to the difficulty of obtaining dwellings with three sleeping rooms. There is no lack of dwellings with only two sleeping rooms, but as families increase and the children grow up it is evident on moral, as well as on health grounds, such families evidently require a larger amount of sleeping accommodation. To relieve this in some measure at least, I would strongly recommend that the plan which has been repeatedly discussed of making a new road through the top of the Pigwells into the Saltisford, and abolishing the dilapidated and obstructive dwellings, consisting of Gent's buildings and neighbouring properties, which were condemned several years ago, be carried out, and part of the clear space be utilized for the erection of dwellings for married workmen who are constantly employed by the Corporation. The firms of Nelson & Co., and Glover & Co., have both erected limited groups of dwellings for their employes, and the Corporation, who I find employ close on 30 married workmen on the staff, exclusive of those on the sewage farm or at the sewage works, should also take a lead in this much-needed town improvement."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
12,180	22·8	17·2	1·39	161

#### RURAL DISTRICTS.

##### ALCESTER.

Owing to the death of the Medical Officer of Health, no report for last year has been received, but I have received a copy of the Vital Statistics, which on the whole are satisfactory. They are as follows :—

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
11,600	27·5	16·29	1·55	125

## ATHERSTONE.

Mr. MEARS records a higher death-rate than for the three previous years, but a very much less incidence of infectious disease, the cases notified being only 68, compared with 222 in the previous year. The Zymotic death-rate was somewhat high, but this was due almost entirely to increased fatality from Measles, Whooping Cough and Diarrhœa. The infant mortality was very high, reaching the figure of 198 per 1,000 births.

Referring to this very serious question of high infant mortality, Mr. MEARS says, "I think it would be very desirable if in the death certificates of young children from gastro-intestinal diseases, it could be noted whether the child had been nursed by the mother or had been fed by feeding bottles. I have long held the opinion that a vast proportion of these deaths are caused by milk which has become sour in the hot weather, and secondly, by the use of the abominable feeding bottles commonly used, namely, those with long india-rubber tubes. I have, on more than one occasion, cut open these tubes, and found them full of stinking milk-curd. It is well known to medical men, that all milk on which young children are fed should always be boiled as soon as it comes into the house, but I find there is a strong prejudice against this with many mothers, but by far the best kind of milk to use is sterilized milk, which can now be obtained at a cost very little exceeding that of ordinary milk."

Eight cases of Typhoid Fever were reported in Atherstone. Most of these cases occurred in the Coleshill Road, where the sewage backed up into the houses during severe storms. Mr. MEARS says, "I am glad to report that the Warwickshire County Council are about to lay a drain to prevent this storm-water finding its way into the sewers."

The water supply in Atherstone is reported as having been unsatisfactory, as the water has only been available for 7 out of the 24 hours. Although it appears that there will be a new supply available in the parish shortly, Mr. MEARS says, "It is very desirable that the proposed scheme for a water supply in conjunction with Baddesley, Baxterly, Bentley and Merevale should be proceeded with, and this at last seems within sight." In Hartshill, too, the water supply was deficient, and the public water supply at Chapel End is reported as being inadequate to the increasing population. In the village of Ansley, the water supply is described as bad in quantity and quality.

At Baddesley, Mr. MEARS says, "I think it very desirable that the sewer should be extended so as to drain the houses adjoining the 'Maypole'." Referring to the same subject at Grendon, he says, "The nuisance so frequently complained of in the straight road has been temporarily abated, but the whole of this part of the district, partly in Grendon and partly in Baddesley, has no proper system of drainage. The drainage, too, from the cottages in the Watling Street road at Mancetter is still very unsatisfactory." Mr. MEARS calls attention to the fact that he reported this in the previous year, but nothing has yet been done in the matter.

VITAL STATISTICS.					Infant Mortality
Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.		per 1,000 Births.
14,905	36.09	18.8	2.8		198

## BRAILES.

Dr. FINDLAY reports a death-rate of 16.1 per 1,000, which is the lowest that has been recorded during the past four years, while more than half the deaths were those of persons 65 years of age and upwards. The rate of infant mortality was very satisfactory, only 54 per 1,000 registered births. There was very little prevalence of infectious disease; only 1 case of Typhoid Fever was recorded, and this was not associated with insanitary conditions, and it is believed that the infection was derived from oysters, of which the person had partaken before he fell ill.

Referring to sanitary work completed, contemplated or required, Dr. FINDLAY says, "The matter of an isolation hospital has been receiving the attention of the Council during the year, and a committee has been appointed to confer with the committee of the Shipston-on-Stour District Council with regard to the erection of a joint hospital on Hanson Hill, near Shipston."

Dr. FINDLAY states that bye-laws for regulating the hours of opening cesspits and removing nightsoil, and for regulating the keeping of pigs in close proximity to dwelling houses, would be most useful.

Referring to the water supply of Brailes, Dr. FINDLAY says, "During the summer the supply almost entirely failed, and it is also liable to pollution as it passes through cattle troughs in fields upon the hill before supplying the fountain. Nothing has been done to improve the water supply of the village of Halford, though some years ago on analysis the public pump-water was found to be polluted. At Whateote the water supply is still unsatisfactory."

VITAL STATISTICS.					Infant Mortality
Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.		per 1,000 Births.
6,600	22.0	16.1	0.3		54



## CASTLE BROMWICH.

Dr. A. BOSTOCK HILL reports that the death-rate, though below the average of the County of Warwick, is much higher than it has been of late, and the increased rate is due almost entirely to excessive mortality in the parish of Minworth. While the rate of infant mortality was satisfactory, the Zymotic death-rate was high, chiefly due to a very serious outbreak of Diphtheria in the parish of Minworth. No less than five of these cases were fatal, and in consequence of this the Medical Officer of Health received a request for a special report on the matter from the Local Government Board. The report was as follows: "Altogether 9 cases have been notified. The first cases occurred at Tyburn in cottages belonging to the Tame and Rea Board, situated on the edge of the sewage farm, and in addition to these there are several cases in the Erdington district in close proximity. I have carefully investigated the matter on the spot, and although in several places there are defects in the construction of the buildings, after careful consideration I have come to the conclusion that the smells arising from the waterlogged condition of this portion of the sewage farm are probably associated with the outbreak. Anybody in the neighbourhood during the hot weather of the past three months must have been aware of the all-pervading odour of sewage effluent, and this is due not to sewage farming proper, but to the fact that the land at and near Tyburn has been for some time past little less than a foul swamp. All the children affected, of school age, have attended either Walmley or Curdworth schools, and on enquiry I find that none of the children in these localities are or have been affected. I may further add that not only were careful enquiries made as to the effect on school attendance of the outbreak, but the milk supply was examined and found to be free from all suspicion."

During the year the important scheme for the sewerage of Castle Bromwich has been completed, and at the end of it the connections with the houses were being made.

## VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
2,500	23·6	15·6	3·6	118

## COVENTRY.

Mr. ILIFFE says, "The past year has been one of exceptional freedom from Zymotic disease." Referring to the foul state of the River Sherbourne, Mr. ILIFFE says, "During the hot and dry months of last summer the river has been very offensive, the bed and banks of which are very foul from Coventry sewage. The Corporation of the City are pushing forward their scheme for the delivery of sewage on their land in the parish of Packington, and when such is complete, early attention to the thorough cleaning out of the river beds and banks will be most desirable."

## VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
285	10·52	14·03	0	0

## FARNBOROUGH.

Mr. FRANEY reports a very satisfactory death-rate during the year, and with the exception of eight cases of Scarlet Fever, a freedom from infectious disease. He says, "I have reason to believe that cases other than those reported occurred at Avon Dassett, which were of a mild character, and not recognised, as no medical man was consulted."

Referring to isolation, he says, "It is simply impossible to carry out isolation properly in small crowded cottages, and it would be a great benefit to this district if a building was set apart for the purpose. Though little complaint was made as to water in the district as a whole, the supply to the north part of Radway has not at present been provided, but there is reason to believe that it will shortly be carried out."

## VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,697	12·96	10·0	0	90

## FOLESHILL.

Mr. ORTON records continued prosperity in this district, and a consequent overcrowding of working-class dwellings; the death-rate however was fractionally lower than in the preceding year. Though the Zymotic death-rate was low, a fair number of cases, viz., 326, were notified. Scarlet Fever was epidemic in July, and necessitated the closing of the Collycroft Schools, and afterwards, as it extended to the central portion of the town, all other schools were similarly dealt with, while later on outbreaks at

Walsgrave-on-Sowe and Keresley were effectually treated in the same manner. There were 47 cases of Typhoid Fever reported, of which 5 proved fatal. At a meeting of the Council specially called it was decided to erect an infectious hospital, and 17 cases from overcrowded houses were removed to hospital. The disease appears to have been associated with polluted water, which was condemned on analysis, and a better supply has since been substituted.

Referring to the water supply, Mr. ORTON says, "Great scarcity prevailed in many parts of the Union, the most marked districts being Longford and Keresley. The North Warwickshire Water Company have commenced boring operations both without and within our boundary. The results of these borings are reported by the engineers to be satisfactory. As to Bedworth, the works are nearing completion, and it is anticipated from the statements of the engineer who has thoroughly tested the supply that it will be more than sufficient for the requirements of the town."

Referring to Foleshill sewerage, Mr. ORTON says, "The Council have had this subject before them for the whole year, and when about to apply to the Local Government Board to hold an enquiry into the matter, the Coventry City Council made a report to the Local Government Board praying for an extension of their boundary so as to include part of the Parish of Stoke in their district. Pending the decision of this representation the matter will, I understand, remain in abeyance. In Stoke, sewage works have been constructed to deal with a portion of the sewage, and what has been done appears to be satisfactory."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
23,955	37·6	17·3	0·8	161

#### MONKS KIRBY.

Mr. TUBE THOMAS again reports a satisfactory death-rate, though slightly higher than last year. Only one death occurred from Zymotic disease, and this from Diarrhœa. The water supply at Pailton, which was condemned in 1897, is still bad, and work upon the well has been done with the intention of improving the supply. At the present, however, it is doubtful whether this has succeeded. At Pailton, Mr. THOMAS reports that the drainage is "into ditch and stream, the outfall is too near the public highway, and should be removed further away."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,844	24·94	11·93	0·54	65

#### NUNEATON.

Mr. COOKSON says, "In presenting you with my annual report, I have to record a favourable death-rate for the year, namely 15·2 per 1,000. The Zymotic death-rate is also favourable, being 1·17 per 1,000, whilst the infant mortality is very heavy, being 216 per 1,000 of the registered births. At Astley three children were suffering from Scarlatina at the Market End Farm, and Mr. COOKSON found the mother who was in attendance on them also taking charge of the dairy. When remonstrated with she promised not to go near the dairy till her medical attendant considered all infection passed."

A case of Croup was notified at Astley. On examination the cesspool from the privy was found to be close to the elementary school. This has since been closed and earth closets substituted. Mr. COOKSON says, "The drainage throughout the district is now fairly satisfactory, but the water supply is very defective in Astley and Arley."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,703	21·8	15·2	1·17	216

#### STRATFORD-ON-AVON.

Dr. THOMSON reports favourable statistics on the whole for this district. He says, "The infantile death-rate of the district for 1898 is unusually high, and if maintained at the same rate for a term of years would indicate a very unsatisfactory condition of affairs; but this has not been the case, and in 1897 the rate was at the very low degree of 98 per 1,000 births registered."

Referring to infectious disease, Dr. THOMSON says, "that Scarlet Fever has been notified from almost all parts of the district during the year, and it is gratifying to find that in many instances the prompt



notification and removal to hospital of the earliest cases seemed to stop what threatened to be a widespread epidemic. Two cases of exposure in public of patients suffering from Scarlet Fever occurred, and in one case the father of the exposed child was cautioned."

Only 4 cases of Typhoid Fever were reported, 2 being from Henley-in-Arden, the first having brought the infection from Birmingham, where he lived.

Referring to water supply, Dr. THOMSON reports that in Alveston Parish a pure and practically unlimited supply has been obtained by sinking an artesian well. The well is capable of supplying the parishes adjoining Alveston should this be required later on.

Referring to river pollution, Dr. THOMSON says, "In the past year I have reported to your Council on the pollution of the brooks at Wellesbourne and at Wootton Wawen from discharge of crude sewage into them, and the latter is at present receiving consideration."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
10,992	23·3	15·9	0·9	140

#### TAMWORTH.

Dr. FAUSSET reports a very satisfactory death-rate, viz., 12·7, the same figure as in 1898, though the birth-rate has increased upwards of 4 per 1,000. The Zymotic death-rate was considerably higher, but the increased mortality was due to Whooping Cough and Diarrhœa. Scarlet Fever was very little prevalent, and there was no mortality from it. Whooping Cough, however, was prevalent throughout the summer in the parishes of Newton Regis, Seckington, Alvecote, Amington and Kingsbury, and 7 deaths resulted from it. Influenza was also very prevalent in the early months of the year. As regards sanitary improvements effected during the year, Dr. FAUSSET reports that at Amington and Stoney Delph over-crowding has been dealt with, and that various nuisances have been abated after inspection of cottages. At Austrey two old dilapidated cottages were closed. At Kettlebrook plans have been prepared for a proper system of sewerage and sewage disposal. A new sewer is in course of construction at Kingsbury owing to the increase of houses, while a vertical precipitation tank will be constructed later on to deal with the sewage. Sanction has been received for the provision of a public water supply for Kingsbury. The work of laying the pipes was commenced on the first of November, and water is available in parts of the district. At the present time, pending the completion of works, water for the use of Kingsbury is carted from New House Farm, but it is expected that the mains will be laid through the village and the connections made very shortly.

Dr. FAUSSET reports that negotiations are pending for the acquisition of the Alders Weir from Messrs. MARSDEN & SONS, and he says, "It is much to be hoped that their endeavours will be successful, as by this means the water-logged condition of the ground and the liability to floods will be much decreased, thereby making the district much drier and healthier."

Referring to the pollution of the Tame, Dr. FAUSSET says, "This subject, which is so important to the welfare of your district, has in some respects taken a turn for the better since my last annual report. The joint enquiry of the Staffordshire County Council and the Birmingham City Council has terminated, and a joint report has been issued, which, however, has not been circulated, but enough information has leaked out to show that it is strongly condemnatory of the Drainage Board. The Board have, in consequence, on the advice of Dr. REID, Professor DEWAR and Mr. HAWKSLEY agreed to make various alterations, and amongst others that the farm in future shall be worked, firstly, with regard to what is best for the disposal of the sewage, and only, secondly, from a farming point of view. It is greatly to be desired that this promise may be carried out, but it appears to me that if the Board are earnest in their promises to stop pollution they should close the various secret outlets or backdoors by which, in defiance of the agreement entered into with you in March, 1897, they have poured into the river large quantities of sewage simply mixed with lime."

In conclusion, Dr. FAUSSET says, "There are four important questions which seem to require your unremitting attention during the present year, viz. (1), the carrying out of the remainder of the scheme for the removal of the weirs; (2) a scheme of sewerage and sewage disposal for Bolehall and Glaseote and part of Wigginton in connection with the Borough scheme; (3) the carrying out of the present scheme of water supply for a part of the Parish of Kingsbury, and the consideration of the question of a supply for the remainder of this extensive parish; (4) a continuation of the measures already taken with regard to the prevention of the pollution of the river Tame."

#### VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
10,944	37·4	12·7	1·6	124

RURAL DISTRICTS IN MID-WARWICKSHIRE COMBINED DISTRICT, INCLUDING  
MERIDEN, RUGBY, SOLIHULL, SOUTHAM, AND WARWICK.

MERIDEN.

Dr. WILSON reports that the general health of the district has on the whole continued to be very satisfactory during the year. The infant mortality was satisfactory, the figure being 109. Two deaths from Scarlet Fever occurred in Nether Whitaere parish, where there was a limited outbreak in the last quarter of the year, and the school was closed. Altogether 25 cases were reported. Six cases of Diphtheria and 4 of Typhoid Fever, two of which were imported, were notified. Whooping Cough was prevalent in Allesley at Eastern Green, and the schools were closed in consequence, as were those at Berkswell and Meriden on account of the prevalence of Measles.

Referring to works of a public nature, Dr. WILSON says, "It is gratifying to be able to report that the drainage defects in the village of Allesley, and the nuisances at the outfall which have been repeatedly reported and discussed, have at last been thoroughly abated by carrying out a complete scheme, which not only meets all present requirements, but has been designed to permit of large extensions in the event of new houses being erected."

Dr. WILSON, referring to the water supply of Marston Green, says, "The free and independent action of the Council has been hampered by the fact that the village is situated within the area embraced by the Birmingham Water Acts, and as the supply recommended by the consulting engineer is to be obtained from the well at the Marston Green Homes, negotiations had to be entered into with the Birmingham Corporation and the Birmingham Board of Guardians. The negotiations all through have been carried out in a very conciliatory spirit, and considering the terms which the Corporation are legally empowered to enforce, I may also say, in a liberal spirit, but for so small a village the scheme will be on the lowest terms a somewhat costly one."

Dr. WILSON records that during the year building bye-laws have been approved, and are now in force throughout the whole of the district.

RUGBY.

Dr. WILSON reports that not only is the death-rate below the average of previous years, but the death-rate from Zymotic disease, and the rate of infant mortality, are also below the average, and that on the whole the general health of the district continued to be very satisfactory. Only two cases (non-fatal) of Diphtheria were recorded during the year, but three deaths were attributed to Typhoid Fever. Two of them were associated with insanitary conditions, but the other was imported. Only 29 cases of Scarlet Fever were reported, of which 2 proved fatal.

Referring to questions of sanitation, Dr. WILSON says, "I trust that the Council may yet see it advisable to adopt them (*i.e.*, bye-laws) for the whole of the district, as I recommended in the first instance, for though only a few cottages may be erected from time to time in the outlying parishes it is very essential that they should be constructed in accordance with proper sanitary requirements, and that the drainage and outside offices should be in every respect satisfactory, and carried out under supervision."

Attention is called to the fact that no steps have been taken to provide a proper water supply for Grandborough, where there was a great scarcity during the autumn months. Public scavenging too is referred to as being necessary in the opinion of Dr. WILSON for the village of New Bilton, owing to the increase in its population.

SOLIHULL.

Dr. WILSON reports, "The death-rate from Zymotic disease though much below the average of the country generally is above the very low average of previous years, but out of the 15 deaths 8 were attributed to Diarrhœa, which owing to the excessively warm weather of the last summer and autumn months was more prevalent than usual, and 4 to Measles and Whooping Cough. Only three were attributed to the more dangerous infectious diseases, namely 2 to Diphtheria, and 1 to Typhoid Fever, but taking into consideration the comparatively few cases of infectious diseases notified, and the immunity from outbreaks of a marked character of any account, the general health of the district has continued to be very satisfactory during the whole of the year."

There were 43 cases of infectious disease notified under the Act, of which 31 were Scarlatina.

Referring to matters of sanitation, Dr. WILSON reports that the recommended improvement to the drainage of Ulverley Green was completed during the year, and the drainage of Kineton Green is in progress.



Referring to sewerage, Dr. WILSON says, "There are still several properties in Solihull within the statutory distance of sewers and water mains which are not provided with water closets. I would recommend that in these cases notice be given to convert the pail closets or privies into W.C. closets, to improve the sanitation of the houses themselves, and to abate the nuisance which attends scavenging, any deep midden ash-pits on premises not within the statutory distance of sewers should all be filled up to the ground level."

#### SOUTHAM.

Dr. WILSON says that, "While the birth-rate is the same as for the previous year, the death-rate though slightly above that of the previous year is still below the average, while the rate of infant mortality is much below the average. The Zymotic death-rate, which was entirely due to Measles and Diarrhœa, is also slightly above the average, and the fact that there were no other deaths from infectious disease except those from Measles, and that so few cases were notified under the Infectious Diseases (Notification) Act, is not only very gratifying, but affords the best evidence of the satisfactory condition of the general health of the district."

In consequence of a few cases at Harbury towards the close of the year the elementary schools were closed. Only one case of Typhoid Fever was notified at Harbury and was associated with a polluted well.

Referring to works of a public nature, Dr. WILSON says, "The question of water supply for Southam has been placed in the hands of a competent engineer, and various gaugings have been made of the yield of the Tom well and adjoining springs, as well as enquiries at Shuckburgh, Napton and Ladbroke, but further gaugings and enquiries must be made next summer and autumn before a scheme can be decided on which will not entail undue delay, but yet afford an ample supply." Dr. WILSON again recommends that building bye-laws be adopted.

#### WARWICK.

\* Dr. WILSON reports that the death-rate, the Zymotic death-rate, and the rate of infant mortality are below the average of this district, always a low one, and that the general health of the district has been very satisfactory. Seventeen cases of Typhoid Fever were reported, of which 10 occurred in Budbrooke parish. This outbreak was associated with privy and pigstye nuisances and defective drainage, and there was also nuisance from the field in front of the cottages on which the sewage from the Asylum stables, slaughter-house and two cottages is utilized. The privy and pigstye nuisances and drainage defects in connection with the cottages were remedied, and the Asylum Authorities have undertaken to prevent any further nuisance in the adjoining field by carrying out a different method of treatment. Two wells which supplied water to the cottages in which almost all the cases occurred have always yielded water of a very suspicious quality indeed. One well was a draw-well, which was not used at the time of the outbreak, and I found the other well to be polluted. Both wells have been thoroughly cleaned out, clay-puddled, and paved, and a pump placed in the draw-well; but as I have previously reported, the strip of ground on which these cottages are built between the Asylum wall and the public road is so cramped that the wells will be always more or less liable to pollution.

Unfortunately Diarrhœa was more prevalent than in recent years, owing to the very warm weather of the late summer and autumn.

Referring to the pollution of the Rivers Sherbourne, Sowe, and Avon, Dr. WILSON says, "During the year frequent inspections of the horribly polluted condition of the Rivers Sherbourne, Sowe, and Avon, have been made, and the nuisance, more especially to the inhabitants of Stoneleigh village, has been greater than ever. It is to be hoped therefore, that the Coventry Corporation will push on their new sewage works with the greatest vigour, and that, meanwhile, by adopting what is called the permanganate treatment of their sewage, the nuisance during the coming summer and autumn will be materially mitigated."

#### VITAL STATISTICS.

	Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
Meriden	11,250	22·7	15·4	0·81	109
Rugby	14,450	27·6	14·6	1·22	105
Solihull	13,950	20·7	12·4	1·07	86
Southam	10,510	26·7	15·0	1·33	96
Warwick	11,510	19·6	12·1	0·78	96

## THE COUNTY AS A WHOLE.

### AREA.

It is this year again noticeable, as I have before pointed out, that the figures of the area of the Administrative County vary slightly from those given in previous years, and for this year they show the area to be 553,369 acres, of which 57,420 are Urban and 495,949 Rural.

### POPULATION.

The estimated population of the Administrative County for the year is 343,303, compared with 336,219 in 1897.

### BIRTHS.

Nine thousand seven hundred and twenty-six births were registered, compared with 9,651 in 1897, and 9,333 in 1896. Calculated on the estimated population, the birth-rate is 28·33, compared with 28·70 in the previous year. The rate is slightly lower than that for the whole of England and Wales, which was 29·4.

Again it is noticeable, that the birth-rate of the Rural districts is almost exactly the same as in the Urban. In the Urban districts, as is practically always the case, the birth-rate was highest in Nuneaton and Chilvers Coton, the figure being the very high one of 40·88. Sutton Coldfield and Leamington, with rates of 17·35 and 19·07, had the lowest birth-rates.

In the Rural districts, the highest rates are observed in Atherstone, Foleshill, and Tamworth, viz., 36·09, 37·6, and 37·4 respectively. Coventry, which is so small a district that it is really fallacious to take it into consideration for a single year, had a birth-rate of only 10·52, while last year it was 36·6. In none of the other districts the rate exceeded 30. The lowest rate is observed in the Farnborough district, viz., 12·96, while in Nuneaton it was only 21·8.

### DEATHS.

Five thousand six hundred and one deaths were registered, viz.: 3,355 in the Urban, and 2,246 in the Rural districts, giving a death-rate of 16·31, compared with 15·23 in the previous year, and 14·9 in 1896. In the Urban districts the death-rate was 17·23, and in the Rural 15·10. In the Urban districts the lowest rates are observed in Erdington, Rugby, and Sutton Coldfield, the figures respectively being 10·70, 11·30, and 11·64. The highest rate is at Bulkington, viz.: 29, while the rate of Nuneaton and Chilvers Coton also exceeds 20.

In the Rural districts, we find the lowest death-rate at Farnborough, where the figure is 10·0, while in Monks Kirby it was only 11·93. Atherstone has the highest death-rate, viz., 18·8, followed by Foleshill with a rate of 17·3. Other districts exceeding a rate of 15·0 are Alcester, Brailes, Castle Bromwich, Meriden, Nuneaton, and Stratford-on-Avon. The death-rate for England and Wales was 17·6.

### ZYMOTIC DISEASE.

There were 647 deaths registered as due to the 7 principal Zymotic diseases compared with 674 in 1897, and 627 in 1896. The deaths registered were as follows:—Measles 124, Scarlet Fever 25, Diphtheria 37, Whooping Cough 48, Fever 48, and Diarrhœa 365. These figures show a slight decrease in the total number of deaths compared with the previous year. There is a marked decrease in the deaths from Whooping Cough and Scarlet Fever, and an increase in the mortality from Fever and Diarrhœa, while the number of deaths from Diphtheria is exactly the same. The Zymotic death-rate for the year is 1·88, compared with 2·0 in the previous year, while for the whole of England and Wales it was 2·22.

In the Urban districts the number of deaths from Zymotic disease was 429, compared with 525 in 1897. This gives us the very satisfactory rate of 2·20 per 1,000. In the Rural districts the number of deaths registered was 218, giving a figure of 1·46, which is also very satisfactory, though it is higher than in the previous year.

**SMALLPOX.**—The County can again be congratulated on the fact that not only has there been no mortality from Small-pox, but not a single case has been recorded in the whole of the districts.



MEASLES.—One hundred and twenty-four deaths were registered as due to this disease, compared with 109 in 1897, and 142 in 1896. On referring to the table it will be seen that with the exception of 6, all the deaths occurred in children under five years of age. Measles has been prevalent in the County for the last 3 years. As regards the number of cases which occurred I have no knowledge, as with the exception of Sutton Coldfield in no district was the disease notifiable, and acting on the advice of their Medical Officer of Health, the Town Council of this borough have with the consent of the Local Government Board withdrawn Measles from the list of notifiable diseases. It will be observed that the disease was chiefly prevalent in the Urban districts, 96 out of the 124 deaths occurring in these. On reference to Table A, it will be seen that nearly 50 per cent. of the mortality occurred in Nuneaton and Chilvers Coton; in fact, the mortality from it in this district was most serious. The mortality from Measles is usually low, rarely exceeding 2 per cent., but in the case of Nuneaton the mortality must have been very much higher, and although nothing is said as to the cause of this, it would be interesting to know what produced the excessive mortality.

SCARLET FEVER.—I remarked last year that Scarlet Fever had been less prevalent than in the two previous years, and I am pleased again to be able this year to record a further decrease. The number of cases recorded was 1,214, compared with 1,628 in 1897. Not only have the cases been fewer, but the mortality has also been less, for while last year 41 deaths were recorded, giving a death-rate per 1,000 of 0·12, in 1898 only 25 deaths were registered, giving the very low death-rate of 0·07.

The disease was more prevalent in the Rural than the Urban districts, as was the case last year. In the former, 697 cases were notified, but in the latter, 517 only, although the population of the Urban Districts is 46,000 more than that of the Rural.

I pointed out last year that the mortality was much heavier in the Urban than in the Rural districts, but this year it is to be noted that the reverse conditions obtain, the deaths in the Urban districts from Scarlet Fever being less than one-half those in the Rural ones.

DIPHTHERIA.—The number of deaths from this disease, including Croup, is exactly the same as that of 1897, viz., 54, compared with 112 in 1896. The number of cases notified has also been less, viz., 234 from Diphtheria, and 28 from Membranous Croup. This compares very favourably with 1897, and more favourably still with 1896, as 537 cases were notified. The disease was chiefly prevalent in the Urban districts, 167 cases being notified in these, while 95 occurred in the Rural districts. The number of deaths recorded was respectively, 34 in the Urban, and 20 in the Rural.

In the Urban districts the disease was chiefly prevalent in Aston Manor, Erdington, Leamington, and Sutton Coldfield; while in the Rural, Castle Bromwich suffered heavily, for reasons already stated and referred to in the summary of the Medical Officer's Report for that district. The only other district in which the notifications ran into double figures was Atherstone. The case mortality remains remarkably constant, the figure for last year being 20·6, compared with 19·8 in 1897, and 20·8 in the previous year.

WHOOPING COUGH was much less fatal than in the previous year, only 48 deaths being registered from it. With the exception of Measles and Diphtheria, however, it still caused a larger number of deaths than any of the infectious diseases. As showing how fatal this disease is to young children, every death but one occurred in children under five years of age. Seventeen of the deaths occurred in the Urban districts and 31 in the Rural.

FEVER, which includes Typhoid and other continued fevers, showed an increased mortality, 48 deaths having been registered as due to the three varieties of Fever, compared with 34 in the previous year. Of these 46 were caused by Typhoid and 2 by other or doubtful forms. Not only has there been an increased fatality but more cases were notified, the figures being 323, of which 304 were due to Typhoid, 19 being ascribed to other continued fevers. The case mortality for the County as a whole was slightly above that of the previous year, 14·8 compared with 13·2, but it was less virulent in type than in 1896, when the case mortality reached 20·9. The case mortality in the Urban districts was 2 per 1,000 higher than in the Rural. In the Urban districts it was chiefly prevalent in Aston Manor, Erdington, Nuneaton and Leamington; but in considering these figures it must be borne in mind that 21 of the cases in Erdington occurred at the Workhouse, and are not to be debited to the district proper. In the Rural districts, Foleshill, Atherstone, Rugby and Warwick suffered most; the cases in Foleshill, however, were more than double those of any other district. Coventry, Farnborough, Monks Kirby, and Nuneaton were free from the disease.

DIARRHŒA.—Three hundred and sixty-five deaths, 29 more than last year, were registered from Diarrhœa, giving a death-rate slightly exceeding 1 per 1,000 of the population, and of these no less than 337 occurred in children under five years of age. This figure is slightly higher than in the previous year, and almost double that of 1896.

I have before pointed out in my annual summaries that the chief factor in determining outbreaks of Autumnal Diarrhœa is temperature, and it has been shown that when the temperature of the earth, 4 feet below the surface, reaches 56° F., Diarrhœa becomes prevalent. As we had a prolonged spell of high temperature, much in the same way as the previous year, it was certain that we should have a considerable rise in Diarrhœal mortality. On referring to Table C it will be seen that 255 out of the 365 deaths occurred in Urban districts, and moreover it will be seen that of these, 168 occurred in Aston Manor, and 35 in Nuneaton, so that considerably more than half the mortality from this disease in the County occurred in the two districts whose populations do not reach one-third of the total population of the County. While it is true that heat is the chief factor in determining an outbreak, it must not be forgotten that the conditions to be found among the working-class populations of our crowded districts, viz., dirt in the dwelling and its surroundings, improper feeding, and an ignorance of those physiological principles of the care of young children, all tend to make this disease more fatal. I have quoted in my summary from the remarks of the Medical Officer of Health for Atherstone, who condemns the improper methods of infant feeding, and while he points out how the feeding-bottle may be instrumental in producing a fatal result from this disease, it must also be borne in mind that the feeding of children with bread and other starchy foods which they are quite unable to digest, has perhaps even more to do with it than the improper structure and use of feeding-bottles. As a further illustration of the effect of the character of population on Diarrhœa mortality, it may be noted that the only two Rural districts where the deaths reached double figures were Atherstone and Foleshill, which are Rural in name more than anything else.

I have again drawn up a chart showing the number of cases notified each week of the year of Scarlet Fever, Diphtheria, and Typhoid Fever, in the administrative County. It shows the number of cases reported in each week of the year; the Autumnal rise in all three diseases is very well marked, in fact, in the last week in October the number of cases of Scarlet Fever reported, reached the figure of 43. The largest number of Typhoid cases—23—also occurred in October.

#### OTHER DISEASES.

Three deaths were registered as due to Influenza, viz., 1 at Sutton Coldfield, and 2 at Monks Kirby. As regards diseases of the respiratory organs, 911 were due to Bronchitis, Pleurisy and Pneumonia, compared with 798 in the previous year. The number of deaths from Heart Disease also showed a slight increase. It is probable therefore that in the latter part of the year, Influenza was slightly more prevalent than it has been of late. The number of deaths from Phthisis was 335, of which 223 occurred in the Urban districts. The figure is almost identical with that of the previous year, but owing to the slight estimated increase of population the death-rate is fractionally lower, viz., 0·97 as against 0·99. The question of the large number of deaths caused by Phthisis and other forms of Tuberculosis disease is now receiving, as it deserves, more attention, and it is to be hoped that by bringing the question more fully before the public, that they may be brought to see how important fresh air is, not only in combating the disease when present but in preventing its occurrence and spread.

#### INFANT MORTALITY.

No less than 1,469 deaths were registered in infants under one year of age compared with 1,397 in 1897, and 1,276 in the previous year, and these calculated on the total number of births give a rate of 151 per 1,000 compared with 144 in the previous year. In the Urban districts the rate was 165 fractionally higher than in the previous year, and in the Rural districts the figure was 131, compared with 120 in 1897. The Urban rate of infant mortality is very much too high, and is due chiefly to the excessive mortality from infantile Diarrhœa and Measles. The Rural figure is also too high for Rural districts. What strikes one as strange at first sight is the variation in the rates of mortality in the different districts. The worst rate in the Urban districts is shown by Nuneaton, which has the terribly high figure of 194. This is closely followed by Aston Manor, Bulkington and Warwick, with figures of 186, 173 and 161 respectively. In no other district does the rate exceed 150. The lowest rate is observed in Sutton Coldfield, viz., 91, followed closely by Kenilworth and Rugby, with rates of 94 and 97 respectively.

In the Rural districts the highest rate is seen at Nuneaton, as was the case last year, the figure being the terrible one of 216 per 1,000 births. At Atherstone it was nearly as high, being no less than 198,



while in Foleshill the rate was 161. In no other district, with the exception of Stratford-on-Avon, where the rate was 140, did it exceed 130, and therefore in all the other districts it may be considered fairly satisfactory.

I have called attention in my summary of the report on the Rural district of Atherstone to the remarks of the Medical Officer of Health on this subject. It will be seen that in the town of Atherstone itself the figure of infant mortality was the appalling one of 315, chiefly to be accounted for by deaths in the month of August. Mr. MEARS says, "In this month 15 deaths occurred in children under one year, and of these 11 are due to gastro-intestinal diseases, and 4 to Marasmus." This is indeed a veritable slaughter of the innocents, and one is compelled to cast about and see if something more cannot be done than to merely record and remark upon the condition of affairs. When more than 3 out of 10 children born die in a township before reaching the age of twelve months it seems to me certainly time to consider whether on the score of humanity, as well as of national interests, something cannot be done to reduce the figure to the proportion of other contiguous districts. As a result of much enquiry and of many years' experience I have long come to the conclusion that if anything is to be done to prevent this appalling waste of human life it must be by letting the people themselves see that such deaths are easily preventable. The bulk of them are due, as I have shown, to ignorance on the part of mothers as to the necessity of proper tending and feeding of their infants, and in casting about for a remedy for the present condition of affairs, I feel compelled to make the suggestion that the time has arrived when, as is done in some of the larger cities of the country, Health Missioners or Health Visitors should be sent round, particularly into those districts of the county where this high death-rate is observed, to endeavour, not only by precept but by example, to stimulate that knowledge which is necessary for the protection of infant life. Lectures given in public buildings, however earnest be the lecturers, do not reach the people who have most need of them, and it is only by visiting the homes of the people who need the advice that progress can be made, and work of real value be accomplished. I therefore throw out the suggestion whether it is not in the early future desirable and possible to utilize funds allocated to technical education for the purpose of appointing two or more lady visitors whose duty it would be to endeavour to improve the state of things existing, more particularly in certain districts.

## A SUMMARY OF MATTERS INFLUENCING THE PUBLIC HEALTH, TO WHICH ATTENTION IS DIRECTED IN THE REPORTS OF THE DISTRICT MEDICAL OFFICERS OF HEALTH.

### NOTIFICATION OF DISEASE.

The position is just the same as it was last year, every District Council but one, viz., the Rugby Urban, has adopted the Notification Act. I have quoted the remarks of the Medical Officer of Health of the district referring to this matter, forcibly pointing out the disadvantages which result from an absence of notification.

### ISOLATION AND HOSPITAL ACCOMMODATION.

As I have before pointed out, hospital accommodation is fairly well provided for the Urban districts, and the position of affairs does not seem to have advanced much since last year. In two districts only is there no general infectious hospital, viz., Bulkington and Rugby. The latter, however, has a Smallpox Hospital, but no cases either of this disease, or of any other, were isolated in it during the year. Referring to Rugby, Dr. WILSON says, "With regard to the town of Rugby and the Rugby Rural District the question of providing a joint hospital is still *in statu quo*, but as building is already encroaching on the site purchased and approved by the Local Government Board at New Bilton, I reported, at the request of the Rugby Urban Council, on an alternative site which belongs to them, and reported very favourably on that site." It is to be hoped therefore that the condition of affairs which has existed now for some considerable time will soon be altered, and this important matter dealt with according, to the recommendations of the Medical Officer of Health.

Referring to Bulkington I do not gather from the report that this matter has again been under consideration. I have quoted the remarks of the Medical Officer of Health, who strongly advises the Council to get a small isolation hospital, or to make arrangements with other authorities for the treatment of Scarlet Fever. In regard to this I think it very undesirable that a district with so small a population as that of Bulkington should endeavour to establish and maintain an isolation hospital of its own. I have in previous reports pointed out the objection of these small hospitals. They cannot be so well equipped as larger ones, they must of necessity be proportionately more expensive, and as a rule they are not in working order when required. It is to be hoped therefore that the Bulkington Council may see speedily the desirability of making arrangements with a neighbouring district for the reception of its infectious sick.

In six of the Rural districts there is no hospital, viz., Brailes, Farnborough, Meriden, Nuneaton, Rugby and Southam, and with the exception of Brailes, no steps appear to have been initiated during the past year. In this district however the matter has cropped up. The Medical Officer of Health says, "The matter of an isolation hospital has been receiving the attention of the Council during the year, and the Committee has been appointed to confer with the Committee of the Shipston-on-Stour District Council, with regard to the erection of a joint isolation hospital on Hanson Hill, near Shipston." It is to be hoped that this conference will bear fruit, because, by a joint arrangement such as is suggested, will both districts be the most efficiently served.

By referring to Tables D and E it will be observed that nearly all the patients isolated were suffering from Scarlet Fever. In certain of the districts, viz., those around Leamington and Stratford, Diphtheria and Typhoid Fever patients are received, but in the larger number of instances Small-pox and Scarlet Fever only are dealt with. There can be no doubt that Diphtheria is a disease which in many instances can only be properly treated in a scientifically-equipped isolation hospital. It is at least doubtful whether much advantage is gained by the modern serum treatment in the houses of the working classes where there must of necessity be inefficient nursing, and I consider that the time is ripe for many of these districts with established hospitals to take into consideration the desirability of extending their accommodation for, more especially, Diphtheria, and also Typhoid Fever.

#### RIVER POLLUTION.

The two great sources of pollution in the County, viz., the pollution of the Tame by the Tame and Rea Drainage Board, and that of the Sherbourne and Sowe by the Coventry Corporation, appear to be continuing much the same as last year. I have quoted in full the remarks of Dr. FAUSSETT in the former case, from which it will be seen that while he hopes for some improvements as a result of a report by experts on the methods hitherto adopted, he appears to suggest that not only is pollution taking place by insufficiently purified effluent, but that practically unpurified sewage is still being allowed to gain access to the river in violation of agreements to the contrary. As regards the Coventry pollution, the works being carried out by the Corporation of the City appear to be going forward with all possible speed.

#### VACCINATION.

I regret to have to record that again a comparatively small number of reports show what amount of Vaccination has been carried on in the districts. Indeed, this year, I have only received statistics from 10 districts compared with 12 in the previous year. As far as these figures go, incomplete though they are, I regret to say that they show a still further decrease in the number of children vaccinated, for while the percentage last year on the returns submitted was 63, in 1898 it was only 53. Several Medical Officers of Health refer to this. The Medical Officer of Health for Aston, after describing the alterations made in the new Act which came into force in 1899, says, "These alterations made by the Vaccination Act of 1898, and the number of children now vaccinated with one mark, point to much more severe epidemics of Small-pox in the future, and will require a larger hospital to be provided for the isolation of cases, especially bearing in mind that Small-pox is more likely to be spread by mild or modified cases, than by severe unvaccinated ones which cannot be mistaken. I trust therefore that this Council will consider the matter of providing the new Small-pox hospital as an urgent requirement for this district, in order to be ready to isolate the first few cases, and to cope with the epidemic which will certainly come sooner or later." The Medical Officer of Health for Leamington says, "In consequence of the new Vaccination Act parents delay the vaccination of their children. At the end of December, 1898, about 300 children in Leamington remained unvaccinated. I am informed on good authority that fully 80 per cent. or more of these will be submitted to the public vaccinator later on." The Medical Officer of Health for the Rugby Urban district says, "The blind and unreasoning revolt against Vaccination which has spread all over the country as a sequel to the helpless conscience clause in the Vaccination Act of last year, is accumulating a vast number of unprotected children, who will undoubtedly fall victims to the disease when it again becomes prevalent. Hospital accommodation, even when it is provided, will prove futile to assist in preventing the holocaust, unless as was shown at Gloucester, vaccination and re-vaccination are vigorously carried out, and dissentients as was the case there, are terrorised by the disease into the adoption of this, the only reliable protective measure, which was so much scouted and neglected there before the outbreak began to take hold." With these remarks I absolutely agree, and I can only regret that in certain



parts of the County such mistaken notions are not only held, but are apparently gaining ground, with the result, that in certain parts, notably Foleshill, less than 25 per cent. of the children born are being protected.

#### ELEMENTARY SCHOOLS.

From the summaries of the various reports, it will be seen how frequently elementary schools have been closed for the purpose of preventing the spread of infectious disease, particularly Measles and Scarlet Fever. There can be no doubt from every point of view when Measles, particularly, becomes epidemic in a neighbourhood, that less interference is caused with education by a judicious closure of schools than by allowing them to remain open with a diminished attendance and a prolongation of the epidemic.

#### SCAVENGING.

I am glad to see in many of the reports that this important subject is receiving more and more attention. There can be no doubt that one of the pressing questions of the day, particularly in Rural or Semi-Urban communities, is the provision of thoroughly sanitary means for the removal of refuse. In the reports of the Medical Officers of Health of Aston, Erdington, and Kenilworth, attention is called to the subject. I have quoted from the Aston report the remarks of the Medical Officer of Health, in which he suggests the possibility of the outbreak of Typhoid being associated with pollution of the ground by middens and midden privies. While at one time Typhoid Fever was thought to be almost exclusively a water-borne disease, we know now that in many instances it appears to arise when the water supply is above suspicion, and the only cause to be found is a pollution of the ground, the ground air, and consequently the atmosphere, with fœcal emanations. It is to be hoped therefore that gradually means will be taken to abolish what must now be considered the sanitary abomination of the privy and the privy midden, at least when close to dwellings.

#### DISINFECTION.

Last year I called attention to the fact that the Medical Officer of Health reported unfavourably of the arrangements for disinfection in the Aleester district. This year I find that the subject is touched upon by several Medical Officers of Health, particularly those for Aston, Leamington, and Rugby. I have quoted the remarks in the summaries of the reports for those districts to which I would refer you, and would point out that the matter as regards Aston is even more important than it appears on the surface, for not only is this disinfecting station in use in the most populous district of the County, but it is used exclusively by three other districts in the County, namely, Sutton Coldfield, Erdington and Castle Bromwich. There cannot be the least doubt that disinfection by hot air is entirely behind the times, and it is necessary having due regard to the safety of the residents that steam disinfectors should be substituted for these old-fashioned and comparatively inefficient machines.

#### INSPECTORS' REPORTS.

It is with great pleasure I observe, that except in a few instances reports have been sent of the work done by the Inspector of the various districts, and in nearly every instance the suggested form issued by your Council has been adopted. Some little opposition has been shown to the use of this form, and I am quite aware that for certain districts it would be possible to draw up a form giving information in a more detailed, and perhaps better way; but the main thing for the purpose of collating statistics is to have such statistics drawn up on the same plan, and whereas an elaborate form would be unsuitable for the smaller districts, the form suggested appears to meet, from the County point of view, the requirements of the case. The returns show that very much good work has been done, and give evidence of the large number of visits which have been made to various properties throughout the year. It is satisfactory too to find that a very large proportion of the nuisances discovered have been abated after notice.

#### WEEKLY RETURNS.

The weekly returns of notification of infectious disease have been sent in even more satisfactorily than in past years, and now on every Wednesday in each week every Medical Officer of Health in the County is supplied with a form giving details of cases notified in the previous week throughout the County. Such information, particularly in times when diseases are tending to become epidemic, must of necessity be of the greatest value.

## CONCLUSION.

As I have had the honour of making this report for a period of 10 years I will conclude it with a summary of the death-rates in the County from the three most important Zymotic diseases, viz.: Typhoid Fever, Diphtheria and Scarlet Fever. The following are the figures for the 10 years:—

	Typhoid Fever.	Diphtheria.	Scarlet Fever.
1889.	0·12	0·12	0·10
1890.	0·07	0·07	0·13
1891.	0·13	0·08	0·20
1892.	0·10	0·08	0·07
1893.	0·19	0·12	0·05
1894.	0·05	0·08	0·05
1895.	0·06	0·19	0·09
1896.	0·11	0·25	0·18
1897.	0·09	0·11	0·12
1898.	0·13	0·10	0·07

It will be observed that the rates from Diphtheria and Scarlet Fever are lower than during the past three years, while the rate from Typhoid Fever is only fractionally higher. This perhaps is to be accounted for by the fact of the dry hot summer, which for various reasons tends to produce an increase in this disease. The general death-rate is again below that of England and Wales; the Zymotic death-rate is also below that of the country, while as in the previous year our Zymotic death-rate would appear more satisfactory than it does were it not for the excessive mortality in two or three of the districts in the County from Infantile Diarrhœa. There can be no doubt that much more attention is now given to sanitary requirements than formerly, and there can also be no doubt that as our knowledge of sanitation increases we shall find it necessary to increase our efforts for the prevention of Zymotic sickness. It is difficult to advance faster than public opinion, and therefore our great hope of advancement in the future, rests to a large extent on the dissemination of that knowledge which leads to health among all classes of the community.

I remain,

My Lords and Gentlemen,

Your obedient Servant,

A. BOSTOCK HILL, M.D., D.P.H., Camb.,

Fellow and Examiner of the Sanitary Institute,

Professor of Hygiene and Public Health, Mason University College, Birmingham,

Lecturer on the Laws of Health, Saltley Training College,

&c., &c.









**B.** TABLE OF DEATHS during the Year 1898, in the RURAL SANITARY DISTRICTS of the COUNTY OF WARWICK, classified according to Diseases and Ages, and shewing also the Area and Population of such District, and the Births therein during the Year, together with Birth, Death and Zymotic Rates, and the Rate of Infant Mortality.

DISTRICTS.	AREA IN ACRES.	Population per Square Mile.	Birth Rate.	Death Rate.	Zymotic Death Rate.	Infant Mortality under 1 year to Registered Births per 1,000.	POPULATION AT ALL AGES.		MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.						MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS IN PERSONS UNDER FIVE YEARS OF AGE.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
							Census 1891.	Estimated to middle of 1898.	Registered Births.	At all ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and up- wards	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not "spasmodic").	Whooping Cough.	Continued Fever.			Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Influenza.	Phthisis.	Bronchitis, Pneu- monia, & Pleurisy.	Heart Disease.	Injuries.	Other Diseases.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
																							Typhus.	Enteric or Typhoid.	Other or Doubtful.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Alcester	...	37,850	196	27·5	16·29	1·55	125	11,483	319	189	40	9	7	5	50	78	Under 5 5 upwds.	1	1	..	2	3	..	2	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..</





**D.** TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS coming to the knowledge of the Medical Officers of Health during the year 1898, in the URBAN SANITARY DISTRICTS of the COUNTY OF WARWICK, classified according to DISEASES, AGES and LOCALITIES.

[illegible]

**E.** TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS coming to the knowledge of the Medical Officers of Health during the year 1898, in the RURAL SANITARY DISTRICTS of the COUNTY OF WARWICK, classified according to DISEASES, AGES and LOCALITIES.

DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.										NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Census 1891.	Estimated to middle of 1898.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.						Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.						Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.					Erysipelas.	Measles.	Whooping Cough.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
(a.)	(b.)	(c.)	(d.)	(e.)	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Alcester	11,483	11,600	319	Under 5 5 upwds.	..	19	1	2	..	.. 4	..	..	..	..	1	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	16	49	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..



**F. TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS** coming to the knowledge of the Medical Officers of Health during the year 1898, in the COUNTY OF WARWICK, classified according to DISEASES, AGES, and LOCALITIES.

DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.														NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.												
	Census 1891.	Estimated to middle of 1898.			FEVERS.										Whooping Cough.	FEVERS.															
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.		Erysipelas.	Measles.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			
(a.)	(b.)	(c.)	(d.)	(e.)	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13	
Urban Sanitary } Districts	166,187	194,608	5,536	Under 5 5 upwds.	...	205	39	15	...	10	...	...	...	...	10	126	...	...	54	2	...	...	...	...	...	...	...	...	...	...	
					...	312	111	2	...	179	1	...	10	...	149	187	...	...	172	5	...	4	...	...	...	...	...	...	...	...	...
Rural Sanitary } Districts	141,600	148,695	4,190	Under 5 5 upwds.	...	214	18	8	...	6	7	...	...	...	9	...	...	58	...	...	...	2	...	...	...	...	...	...	...	...	
					...	483	66	3	...	109	11	...	9	...	105	...	...	239	8	...	...	29	2	...	...	...	...	...	...	...	...
Totals	307,787	343,303	9,726	Under 5 5 upwds.	...	419	57	23	...	16	7	...	...	...	19	126	...	...	112	2	...	...	2	...	...	...	...	...	...	...	
					...	795	177	5	...	288	12	...	19	...	254	187	...	...	411	13	...	...	33	2	...	...	...	...	...	...	...

**G.** TABLE shewing SANITARY WORK done in the INSPECTORS' DEPARTMENTS during the Year 1898, in the URBAN SANITARY DISTRICTS of the COUNTY OF WARWICK.

[illegible]



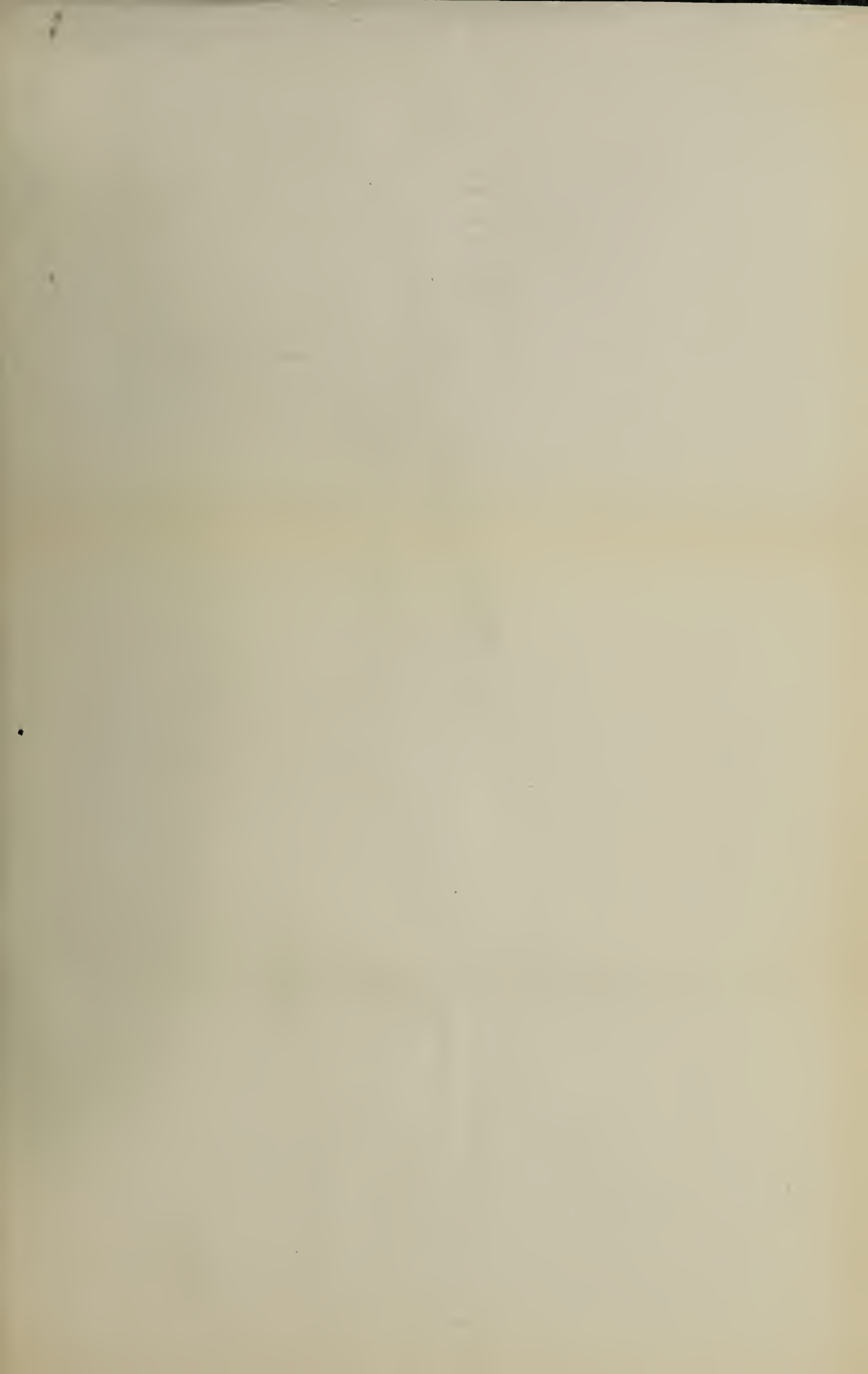


1. RETURN, shewing the number of Births Registered, together with the number of such cases successfully Vaccinated or otherwise disposed of in the Districts of the COUNTY OF WARWICK during the year ending 31st December, 1898.

VACCINATION DISTRICTS.	No. of Births Registered during the year ending 31st Dec., 1898.	No. of these cases successfully Vaccinated.	Insusceptible of Vaccination.	Died before Vaccination.	No. of Conscientious Certificates.	Cases under Postpone-ment.	Removals to other Districts out of the Union.	No. of cases not to be found.	Number of cases remaining Unvaccinated at date of this Return.
URBAN DISTRICTS.									
Aston Manor... ..	2,596	1,769	8	321	2	70	13	138	275
Bulkington ... ..	...	...	...	...	...	...	...	...	...
Erdington ... ..	383	211	3	35	3	17	1	13	100
Kenilworth ... ..	...	...	...	...	...	...	...	...	...
Nuneaton and Chilvers Coton }	...	...	...	...	...	...	...	...	...
Royal Leamington Spa	579	249	2	60	2	15	3	6	242
Rugby ... ..	...	...	...	...	...	...	...	...	...
*Stratford-on-Avon ...	233	138	1	22	19	5	...	8	40
Sutton Coldfield ...	222	124	1	13	3	16	2	6	57
Warwick ... ..	...	...	...	...	...	...	...	...	...
RURAL DISTRICTS.									
Alcester ... ..	...	...	...	...	...	...	...	...	...
Atherstone ... ..	...	...	...	...	...	...	...	...	...
Brailes ... ..	...	...	...	...	...	...	...	...	...
Castle Bromwich ...	44	26	...	2	1	2	...	2	11
Coventry ... ..	...	...	...	...	...	...	...	...	...
Farnborough... ..	20	4	...	1	...	...	...	...	15
Foleshill ... ..	919	228	...	107	83	1	1	...	499
Meriden ... ..	246	109	...	18	...	1	...	...	118
Monks Kirby ... ..	...	...	...	...	...	...	...	...	...
Nuneaton ... ..	...	...	...	...	...	...	...	...	...
Rugby ... ..	...	...	...	...	...	...	...	...	...
Solihull ... ..	...	...	...	...	...	...	...	...	...
Southam ... ..	...	...	...	...	...	...	...	...	...
Stratford-on-Avon ...	...	...	...	...	...	...	...	...	...
Tamworth ... ..	401	148	...	19	...	5	...	2	227
Warwick ... ..	...	...	...	...	...	...	...	...	...
Totals ... ..	5,643	3,006	15	598	113	132	20	175	1,584

\* NOTE.—The Return for Stratford-on-Avon only gives results for ½ year, from 1st of January to 30th of June, 1898.





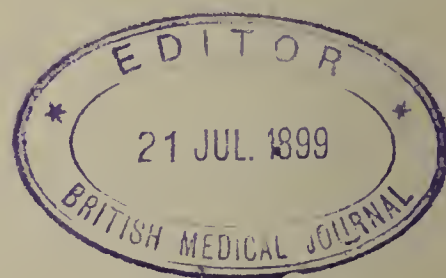
JUNE, 1899.

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*Reports of*  
*Medical Officers of Health.*

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DR. BOSTOCK HILL'S  
SUMMARY.





Number of Cases.

Chart shewing the number of cases notified each week of the year of Scarlet Fever (red), Diphtheria (blue) and Typhoid Fever (black) in the administrative County.

January				February				March				April				May				June				July				August				September				October				November				December			
---------	--	--	--	----------	--	--	--	-------	--	--	--	-------	--	--	--	-----	--	--	--	------	--	--	--	------	--	--	--	--------	--	--	--	-----------	--	--	--	---------	--	--	--	----------	--	--	--	----------	--	--	--

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

